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# DEPARTMENT OF ENERGY NATIONAL DEFENSE PROGRAMS AUTHORIZATION ACT OF 1983

AUGUST 5 (legislative day, JULY 12), 1982.—Ordered to be printed

Mr. WARNER, from the Committee on Armed Services, submitted the following

## REPORT

[To accompany S. 2812]

The Committee on Armed Services, having had under consideration the question of the National Defense Programs of the Department of Energy for fiscal year 1983, reports the following bill, S. 2812, to authorize appropriations for the Department of Energy National Defense Programs for fiscal year 1983, and for other purposes, and recommends that the bill do pass.

### FORM OF COMMITTEE ACTION

The bill on which the Committee held its hearings was S. 2286, as requested by the Administration. The companion bill under consideration in the House is H.R. 6329. Subsequent to the introduction of S. 2286, certain amendments were requested by the Energy Department. These changes, together with those recommended by the Committee, made it desirable to report an original bill.

### PURPOSE OF THE BILL

This bill provides authority for appropriations to the Secretary of Energy for the operating expenses, capital equipment, and construction costs related to the National Defense Programs of the Department of Energy.

### BACKGROUND

#### ESTABLISHMENT OF DEPARTMENT OF ENERGY

Public Law 95-91, enacted on August 4, 1977, established the Department of Energy. The national security functions relating to the

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management and implementation of the nuclear weapons program and other national security activities involving nuclear weapons research and development were transferred from the Energy Research and Development Administration to the Department of Energy.

### CONGRESSIONAL JURISDICTION OVER NUCLEAR ENERGY MATTERS

Committee jurisdiction over all nuclear energy matters was exercised by the Joint Committee on Atomic Energy from 1946 to 1977. Following the adoption of Senate Resolution 4 on February 4, 1977, the Joint Committee was abolished and in the Senate jurisdiction was divided between the Committee on Armed Services and the Committee on Energy and Natural Resources. The Committee on Armed Services was given jurisdiction over national defense programs of the Department of Energy, and the Committee on Energy and Natural Resources was given jurisdiction over the remainder of the activities of the Department of Energy.

### NATIONAL DEFENSE PROGRAMS

National Defense Programs of the Department of Energy involve research and development, testing, production, and maintenance of the nuclear weapons that are the heart of our deterrent nuclear weapon systems. The Department of Energy has seven programs with national security objectives as follows:

(1) Naval reactors development.
(2) Weapons activities,
(3) Verification and control technology.
(4) Materials production,
(5) Defense nuclear waste management,
(6) Nuclear materials security and safeguards development, and
(7) Security investigations.

## Points of Special Emphasis

### THE NUCLEAR WEAPONS STOCKPILE

Ons aspect of the current debate on the various nuclear freeze proposals concerns the size of the nuclear weapons stockpile. There is a common misconception that the number of nuclear weapons in the United States inventory has steadily increased over the years and that we are currently embarked on a building program that will add significant numbers of additional warheads to the stockpile. This simply is not accurate.

The size and content of the nuclear weapons stockpile has varied considerably over the 37 years that nuclear weapons have been in existence. Since 1946, in accordance with the Atomic Energy Act, both the production and the total inventory projections of nuclear weapons have been approved each year by the President in a formal process that involves all key Administration officials, including those with defense, foreign policy and arms control responsibilities. Likewise, the Congress has influenced this program through the annual authorization and appropriation process. During the years immediately fol-

lowing World War II, the U.S. nuclear stockpile grew slowly, since there were limited supplies of special nuclear materials and since there was no nuclear competition. From 1945 until 1948 the stockpile grew from two to fifty weapons. In response to the first Soviet nuclear test in 1949, the U.S. nuclear weapon stockpile grew rapidly during the next decade, reaching its highest level in the mid-1960's at a few tens of thousands of warheads (the precise number is classified). Since that time, the stockpile inventory of warheads has declined in general with some fluctuations in particular years. This situation is depicted in the sketch shown below. Since the precise numbers of warheads is classified, the curve is discontinuous, however, the points to be made from this sketch are:

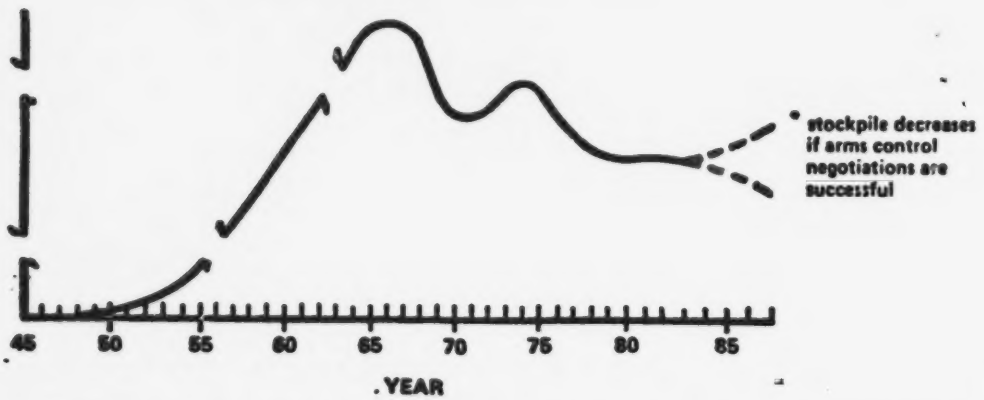
(1) The number of warheads in the nuclear weapons stockpile has declined significantly since the peak years in the mid-1960's.

(2) Many of the weapons in the stockpile are approaching 20 years of age and must be replaced or modernized,

(3) While new warheads are being produced, old warheads are being retired and dismantled; the net effect is a relatively constant number of warheads in the stockpile over the last several years, and

(4) The ultimate number of warheads in the stockpile is a direct function of the success of arms control negotiations.

TOTAL WEAPONS IN STOCKPILE [1]




With respect to total stockpile yield, there has been a dramatic decrease since the mid-1960's. In fact (the stockpile today has only about one-third of the total megatonnage that it contained in 1965. With improvements in accuracy, weapons of smaller yield have become sufficient to satisfy target requirements and the total stockpile yield will not change appreciably in the foreseeable future.

## RESEARCH, DEVELOPMENT AND TESTING

The Committee is pleased to note that the budget request includes real growth in the area of research, development and testing. Basic research, the quest for new ideas and concepts, has been neglected during the past decade.

The Committee is especially intrigued with emerging new concepts involving the so-called "third generation" of weapons. The effort does not focus on bigger, more lethal weapons; rather, the effort focuses on harnessing the power available in nuclear weapons for purely defensive purposes. These concepts could result in weapons, which can only be used to destroy the offensive systems of a potential adversary, and may well render offensive nuclear systems ineffective, thus removing the threat of nuclear war. The Committee directs that the real growth in the research and development budget be earmarked for additional research on this "third generation" of weapons and that the Department develop a deliberate, multi-year program to exploit these concepts. This effort will be the subject of increased scrutiny by the Committee in future years.

### STOCKPILE IMPROVEMENT PROGRAM

The nuclear weapons stockpile contains some weapons that were produced during the 1960's and these same weapons will remain in the stockpile for at least another decade. Last year the Department proposed, and the Committee supported, a "stockpile improvement program" to refurbish these warheads to improve their safety, command and control. The purpose of this effort is to reduce the possibility of an accident that might release nuclear material, to make it more difficult for any unauthorized person to use the weapon as an instrument of blackmail or terror, and to increase the probability that the weapon will work as designed. In essence, the improvements being made are to incorporate modern technology in devices that were built in the 1960's.

The cost of this effort has risen substantially since it was conceived; however, the Committee remains supportive. It is difficult to apply cost-benefit analyses to the issue of nuclear weapons' safety and reliability. On the other hand, the Committee feels that the Department should reexamine this program to see if the numbers and types of weapons now planned to be modernized can be reduced. For instance, the option of earlier retirement, rather than modernization, should be reconsidered. Likewise, it might be possible to modernize only a portion of the inventory of a certain warhead. The Committee will expect this reexamination to have been completed when the fiscal year 1984 budget is considered.

### COMMUNITY IMPACT ASSISTANCE

The Committee has reluctantly agreed to the transfer of community impact assistance authority for Oak Ridge, Tennessee, and Los Alamos, New Mexico, from the Intergovernmental Affairs budget to the Weapons Activities budget. The Committee has two concerns. Recognizing that Section 91 of the Atomic Energy Community Act of 1955 authorizes impact payments until 1986 and 1987 for Oak Ridge and Los Alamos, respectively, the Committee questions the need for continuing such payments. Both sites have existed for several decades and now have a broad base of funding support. There is no apparent difference between these communities and many communities which

exist primarily to support a Defense Department installation. Impact assistance was clearly appropriate during the early years when a significant influx of Federal facilities threw the local economy out of balance. But that situation has long ago stabilized and the Department should consider phasing out community impact assistance. The Committee is also concerned that the defense programs should be expected to fund the entire burden of community impact assistance when a significant proportion of the Federal activity at both sites is in support of other than defense work. If community impact is to be continued, each sector of the Federal effort supported should contribute proportionately.

## Summary of Committee Recommendations

### COMMITTEE HEARINGS

S. 2286 was referred to the Strategic and Theater Nuclear Forces Subcommittee for recommendation to the Full Committee. The Subcommittee held hearings on the bill on April 26, 1982, and received testimony from the Honorable Herman E. Roser, Assistant Secretary of Energy for Defense Programs; Dr. Richard L. Wagner, Assistant to the Secretary of Defense (Atomic Energy); Dr. Roger E. Batzel, Director, Lawrence Livermore National Laboratory; Dr. George C. Dacey, President, Sandia National Laboratories; Dr. Donald M. Kerr, Jr., Director, Los Alamos National Laboratory; and Admiral Kinnaird R. McKee, Deputy Assistant Secretary of Energy for Naval Reactors.

### AUTHORIZATION RECOMMENDED

The total fiscal year 1983 Department of Energy amended request for authorization for defense programs was $5.752 billion, of which $3.438 billion was for research, development, testing, production and surveillance, and retirement of nuclear weapons.

The Committee recommends an authorization of $5.570 billion, a decrease of $182 million. A summary of authorizations granted is shown in the table below and details are provided on a program-by-program basis on the pages that follow.

**ARMED SERVICES COMMITTEE—SUMMARY OF AUTHORIZATION RECOMMENDED**

[Dollar amounts in thousands]

| Program | Budget request | Committee recommendation | Difference | |
|---|---|---|---|---|
| | | | Amount | Percent |
| Naval reactors | $385,760 | $385,760 | 0 | 0 |
| Weapons activities | 3,438,591 | 3,348,891 | −$89,700 | −3 |
| Verification and control technology | 53,900 | 53,900 | 0 | 0 |
| Materials production | [1] 1,297,150 | 1,208,450 | −88,700 | −7 |
| Defense nuclear waste | 501,020 | 505,420 | +4,400 | +1 |
| Security and safeguards | 47,360 | 47,360 | 0 | 0 |
| Security investigations | 28,500 | 20,500 | −8,000 | −28 |
| Total | 5,752,281 | 5,570,281 | −182,000 | −3 |

[1] Includes $109,000,000 originally budgeted by the Navy for uranium enrichment.

## NAVAL REACTORS DEVELOPMENT

The Naval Reactors Development program carries out nuclear propulsion development work essential to the U.S. Navy for maintaining the security of the United States. Nuclear propulsion provides the Navy with ships having virtually unlimited high speed endurance and freedom from the logistics umbilical cord for propulsion fuel. This greatly reduces vulnerability to enemy action and allows ships to be designed with greatly increased capability for sustained combat operations.

This program provides for the design, development, testing, and evaluation of improved naval nuclear propulsion plants and reactor cores having long fuel life, high reliability, improved performance, and simplified operating and maintenance requirements. The nuclear propulsion plants and cores cover a wide range of configurations varying in size from small submarines to large surface ships. The ultimate objective of the program is to develop reactor cores that will last the lifetime of the ship.

Major programs include a Submarine Test Core to test advanced reactor fuels and cladding materials which have the potential for improving core performance and increasing core lifetime; an Advanced Fleet Core which utilizes new concepts which result in longer lifetime; a reactor and propulsion plant for installation in the *Ohio* Class Trident ballistic missile submarines which allows quiet operation of the plant; an advanced design plant for application in future classes of higher speed submarines that will provide significantly higher performance than any other submarine plant now in use; an improved higher power and longer life core for shipboard application; investigation of advanced reactor concepts which offer the potential of increased power density permitting installation of higher powered reactors in a given hull size; efforts to determine the actual useful life of shipboard cores and develop longer life cores; and materials and corrosion testing aimed at extending the life of reactor plants and components beyond the original 20 to 30 years design lifetime in support of the Department of Defense policy of extending ship lifetime.

The budget for fiscal year 1983 provides for the continuation of current programs. The increase over the amount requested in fiscal year 1982 is due to escalation, refueling of a prototype reactor plant, advanced core development efforts, and construction funding offset by reductions in capital equipment.

The Submarine Test Core (STC) is being developed and is intended to replace the Advanced Test Core in the S3G prototype plant. The various modules of this core will consist of advanced reactor fuels and cladding materials. The new materials will be tested to determine the extent to which they offer improved performance and increased lifetime while still meeting the high shock requirements, corrosion resistance, and other stringent operating requirements of naval reactor cores. During fiscal year 1983, STC efforts will continue. These include: continuing STC development work by the core vendor; per-

forming testing of fuel elements, cladding corrosion specimens, and core structural materials; completing manufacture of STC components; performing nuclear and thermal hydraulic analyses to support the Reactor System Performance Analyses, as well as the issuing of operating and testing procedures for STC; and providing design and procurement support for refueling and refueling inspections.

The Advanced Fleet Core (AFC) is being designed to utilize new concepts resulting in significantly longer lifetime. Due to the length of design, development, testing, and manufacturing phases associated with this new core, efforts have been initiated many years in advance of when the core will be available for shipboard use. During fiscal year 1983, development of the AFC will continue. These development efforts include: carrying out nuclear design analyses and providing technical guidance to the core vendor; initiating preparation of nuclear test procedures; continuing thermal/hydraulic testing, instrumentation development, and irradiation testing; testing and delivery of the engineering test cell; providing design guidance during mechanical test cell fabrication; initiating and continuing element preproduction, and fuel assembly and heat treatment process development; completing design of in-core instrumentation and guide paths; continuing the prototype Reactor System Performance Analyses; reviewing and approving vendor analyses of reactor equipment; initiating fuel assembly preproduction, performing safety analyses of the AFC; and designing a reactor servicing system for Advanced Fleet Core installation in a prototype plant.

The Trident ballistic missile submarine is powered by the S8G nuclear power plant. The S8G design builds on the technology initially developed for other submarines. During fiscal year 1983, efforts of a continuing nature will be conducted. These include: performing and evaluating periodic physics tests; operating and maintaining plant and plant support systems; performing reactor plant nuclear, thermal, hydraulic, noise and vibration tests and plant modifications and training; designing and procuring S8G prototype refueling equipment; developing and maintaining operating and casualty procedures for extending operating parameters and simplifying operations under unusual conditions. Further efforts will include: designing power plant, engine room and off-hull systems modifications; revising components and power plant manuals and preparing test procedures and reports for evaluation and troubleshooting of power plant systems and components to properly reflect lessons learned from operational problems; and evaluating possible core design modifications to identify potential design improvements such as use of improved fuel processes or cladding or improved operating conditions and procedures, to attain improved corrosion performance and longer core life; maintaining engineering liaison with the shipyard.

Another major effort in the Naval Reactors Development program is designing and developing an advanced design reactor plant to provide substantially higher performance than any other submarine propulsion plant now in use or being developed. This plant will provide

the option of developing various improved submarine configurations, incorporating new weapons systems and advanced sonars, while retaining or significantly increasing submerged speed. The higher speed capability will allow the Navy to further exploit the nuclear powered submarine's advantages in either an offensive or defensive role. This effort includes operating a partial prototype of the advanced core in a prototype reactor plant at the Naval Reactors Facility located in Idaho. Efforts in fiscal year 1983 will include: performing physics analyses and periodic testing of the advanced submarine core; performing periodic sound monitoring of the reactor; maintaining updated reactor protection analyses; and testing of fuel elements, cladding corrosion, and core structural and plant materials.

Emphasis will continue to be placed on the design, development, test, and evaluation of the D2W core for which projected applications include CGN 36 and 38 Class cruisers and future classes of nuclear powered cruisers. A D2W core is installed and being tested in a prototype reactor plant. This core has a higher power density, is expected to have increased reliability and a longer life than present cores, and incorporates the latest proven technological advances in nuclear system and component design. Due to its longer life this core is expected to power a ship for about 15 years of operation before refueling.

The major D2W developmental areas and anticipated work scopes for fiscal year 1983 are: provide nuclear design lifetime studies for the D2W prototype core; prepare D2W physics test procedures, conduct tests, and evaluate test data from the D2W prototype core; perform plant analysis; develop and maintain operating and casualty procedures for continued plant operations, maintenance shutdowns, refueling and overhaul shutdown, and equipment replacements and training for the D2W prototype; perform reactor and reactor plant tests and plant modifications; maintain plant and plant support systems; prepare for D2W reactor servicing system checkout; provide design analysis for upgraded safety features for the prototype plant; evaluate continued use of prototype mechanical components beyond original nominal life; design electrical system and equipment for D1G prototype upgrading and review operational problems; and continue design analyses of D2W core with the advanced fuel system.

The S7G advanced reactor concept development effort consists of a reactor utilizing a new concept which is currently being tested in a prototype plant. During fiscal year 1983, efforts will include: operating the prototype core; carrying out periodic physics engineering tests; providing physics support for S7G advanced shipboard design studies; and continuing advanced core conceptual designs.

The research and development effort required to evolve improved materials and new manufacturing processes is extremely important to meet the goal of designing and testing reactor cores which have an endurance substantially greater than current designs. Specific technical objectives include: improving mechanical, nuclear, thermal, and hydraulic designs to enhance performance and reduce core manufactur-

ing and refueling costs; and increasing the capability of reactor plant systems and components to make them compatible with extended core lifetimes. Efforts also include developing technological and analytical methods to determine and reduce flow induced noise and vibration. During fiscal year 1983, the materials effort will include: performing irradiation testing of fuel elements, cladding corrosion specimens, and core structural and plant materials; performing chemical analyses of materials; developing and testing advanced fuel; developing and performance testing cladding and structural materials; developing and qualifying alternate plant materials; evaluating performance of current materials; assembling an expended fuel test cell and continuing examination programs for spent naval cores; performing and evaluating various tests on Alloy X-750 and Alloy-600 material; and performing reviews of specifications and coordinating a program to qualify material suppliers.

The following table provides details of the naval nuclear reactor program which was approved by the Committee as requested:

NAVAL REACTORS DEVELOPMENT—PROGRAM SUMMARY

[In thousands of dollars]

| Program/subprogram | Fiscal year 1982 appropriation | Fiscal year 1983 budget request |
|---|---|---|
| Operating expenses | 277,120 | 331,760 |
| Capital equipment | 28,000 | 1,000 |
| Construction by project: | | |
| 83-N-101, general plant projects | | 1,500 |
| 83-N-102, addition to Radioactive Materials Lab, KAPL, Schenectady, N.Y. | | 1,500 |
| 82-N-111, materials facility, SR, South Carolina | 15,000 | 40,000 |
| Subtotal, construction | 54,000 | 43,000 |
| Total, naval reactors | 359,120 | 385,760 |

WEAPONS ACTIVITIES

The weapons activities program budget provides for essential effort required to support the development, testing, production, and lifetime surveillance of safe and reliable nuclear weapons to meet national defense needs. A related effort involving research in inertial fusion is also provided for in this budget because inertial fusion work is relevant to weapons research, particularly with respect to laboratory scale investigation of certain phenomena pertinent to weapons physics. Research, development, and testing activities in fiscal year 1983 will be pursued in support of weaponization (development engineering—

Phase 3) requirements related to the W79 warhead for the 8-inch artillery fired atomic projectile, the W80 warhead for the air and sea launched cruise missile, the W81 warhead for the standard missile–2, the W82 warhead for the 155mm artillery fired atomic projectile, the B83 strategic bomb, the W84 warhead for the ground launched cruise missile, the W85 Pershing II missile warhead, and the W87 Missile–X warhead. It is expected that Phase 3 development engineering could be requested by the Department of Defense for the Low Altitude Air Defense System warhead during fiscal year 1983. This budget is structured to provide a more desirable level of effort for the technology base while still being responsive to the near-term needs of weaponization. The research and development employment in the weapons laboratories is planned to increase by 100 full-time equivalents.

The level of testing effort requested will support tests related to the ongoing weaponization effort in the laboratories and for basic research data in support of future requirements. Emphasis will continue to be placed upon the drilling of emplacement holes for future testing and maintenance of the Nevada Test Site at more appropriate levels.

With regard to the inertial fusion effort, the funds requested in fiscal year 1983 are required to support efforts to obtain the physics understanding required for determining the beam energy and target design requirements for high energy gain. The accomplishment of the program objectives is expected to provide the technical basis for a major program decision. The data obtained by experiments accomplished in fiscal year 1983–87 will permit a determination of the driver and target requirements for high energy gain, as well as provide the basis for weapon physics experiments and measurement of material properties of interest to the nuclear weapons program.

The budget also provides for the production of new nuclear weapons for the stockpile and for the surveillance and maintenance of existing stockpile weapons as approved by the President. Included are the production of nine weapon systems—the B61–3 and –4 bombs, the W70–3 warhead for the Lance missile, the W76 warhead for the Trident, the W78 warhead for the Minuteman II, the W79 warhead for the artillery fired atomic projectile, the W80–1 warhead for the air launched cruise missile, the B83 modern strategic bomb, the W84 warhead for the ground launched cruise missile, and the W85 Pershing II Missile warhead. Efforts are also underway in anticipation of future production decisions for the W80–0 warhead for the sea launched cruise missile, the W81 warhead for the standard missile–2, the W82 warhead for the 155mm artillery fired atomic projectile, and the W87 Missile–X warhead.

The following table provides details of the weapons activities program and indicates changes recommended by the Committee. Each change is discussed following the table:

## WEAPONS ACTIVITIES—PROGRAM SUMMARY

[In thousands of dollars]

| Program/subprogram | Fiscal year 1982 appropriation | Fiscal year 1983 budget request | Committee recommendation | Change from request |
|---|---|---|---|---|
| Operating expenses: | | | | |
| Research and development | 586,900 | 649,600 | 649,600 | 0 |
| Testing | 362,400 | 425,400 | 425,400 | 0 |
| Inertial confinement fusion | 122,362 | 122,000 | 140,000 | +18,000 |
| Production and surveillance | 1,284,656 | 1,573,800 | 1,507,200 | −66,600 |
| Program direction | 50,238 | 51,291 | 46,291 | −5,000 |
| Subtotal, operating expenses | 2,406,556 | 2,822,091 | 2,768,491 | −53,600 |
| Capital equipment: | | | | |
| Research and development | | 62,500 | 62,500 | 0 |
| Testing | | 32,500 | 32,500 | 0 |
| Inertial confinement fusion | | 11,000 | 11,000 | 0 |
| Production and surveillance | | 95,000 | 95,000 | 0 |
| Subtotal, capital equipment | 163,100 | 201,000 | 201,000 | 0 |
| Construction by project: | | | | |
| 83-D-101, general plant projects | | 15,800 | 15,800 | 0 |
| 81-D-133, earthquake damage restoration, LLNL, California | | 1,500 | 1,500 | 0 |
| 81-D-134, earthquake damage restoration, SNLL, California | | 1,700 | 1,700 | 0 |
| 79-7-c, Proton storage ring, LANL, New Mexico | | 2,800 | 0 | −2,800 |
| 83-D-123, general plant projects, various locations | | 16,300 | 16,300 | 0 |
| 83-D-124, standard missile-2 (SM-2) warhead production facilities, various locations | | 7,000 | 7,000 | 0 |
| 83-D-134, low altitude defense system warhead production facilities, various locations | | 16,300 | 0 | −16,300 |
| 82-D-106, weapon assembly facilities, Pantex Plant, Texas | | 16,500 | 16,500 | 0 |
| 82-D-107 utilities and equipment restoration, replacement and upgrade, various locations | | 151,800 | 151,800 | 0 |
| 82-D-108, nuclear weapons stockpile improvements, various locations | | 37,300 | 33,300 | −4,000 |
| 82-D-109, 155mm artillery fired atomic projectile (AFAP) production facilities, various locations | | 30,000 | 27,500 | −2,500 |
| 82-D-111, interactive graphics systems, various locations | | 12,000 | 3,000 | −9,000 |
| 82-D-146, weapons production and production support facilities, various locations | | 50,000 | 50,000 | 0 |
| 81-D-115, MX warhead production facilities, various locations | | 55,000 | 55,000 | 0 |
| 78-17-d, steam plant improvements, Y-12, Oak Ridge, Tenn | | 1,500 | 0 | −1,500 |
| Subtotal, construction | 424,300 | 415,500 | 379,400 | −36,100 |
| Total, weapons activities | [1]2,993,956 | 3,438,591 | 3,348,891 | −89,700 |

[1] Assumes approval by Congress of fiscal year 1982 supplemental request, March 1982, for $51,900,000.

*Operating Expenses—Inertial Confinement Fusion.*—The Committee continues to support strongly the completion of the three testbed facilities—NOVA at Livermore, ANTARES at Los Alamos, and the PBFA at Sandia—and the operation of these facilities for a reasonable period to produce physics data for use in the weapons program and to establish the feasibility of inertial confinement fusion as a

commercial power source. To date more than $1 billion has been authorized for this effort and the construction of all three facilities is nearing completion. The Committee cannot understand why the Administration is cutting back on this effort at this point in the program. Even considering the $18 million added by the budget amendment, the fiscal year 1983 request of $122 million is exactly the level appropriated for fiscal year 1982. The level budgeted for fiscal year 1983 will force personnel cuts at the critical time when facilities are being checked out for initial startup. The Committee has increased the inertial confinement fusion program in fiscal year 1983 to essentially the level approved for fiscal year 1982 as reflected in the following table:

INERTIAL CONFINEMENT FUSION—SUBPROGRAM SUMMARY

(In thousands of dollars)

| Subprogram | Fiscal year 1982 appropriation | Fiscal year 1983 budget request | Committee recommendation | Change from request |
|---|---|---|---|---|
| Glass laser experiments | 65,662 | 66,500 | 75,100 | +8,600 |
| Gas laser experiments | 36,900 | 37,000 | 41,800 | +4,800 |
| Pulsed power experiments | 16,500 | 16,500 | 20,000 | +3,500 |
| Supporting research | 3,300 | 2,000 | 3,100 | +1,100 |
| Total | 122,362 | 122,000 | 140,000 | +18,000 |

*Operating Expense—Production and Surveillance.*—The Committee feels that the increase proposed for production and surveillance is larger than necessary. The Committee recognizes that the new production workload for fiscal year 1983 is up slightly and that production will start on three new warheads. However, production will be completed on two warheads and the warhead retirement workload is down substantially. The Committee recommendation is summarized in the following table:

PRODUCTION AND SURVEILLANCE—SUBPROGRAM SUMMARY

(In thousands of dollars)

| Subprogram | Fiscal year 1982 appropriation | Fiscal year 1983 budget request | Committee recommendation | Change from request |
|---|---|---|---|---|
| War reserve new production | 829,700 | 977,200 | 977,200 | 0 |
| Stockpile maintenance | 97,500 | 139,000 | 139,000 | 0 |
| Stockpile evaluation | 116,200 | 144,500 | 127,000 | −17,500 |
| Process development | 70,500 | 86,200 | 77,000 | −9,200 |
| Other costs | 170,756 | 226,900 | 187,000 | −39,900 |
| Total | 1,284,656 | 1,573,800 | 1,507,200 | −66,600 |

The Committee has allowed the increase requested in new production (18 percent), recognizing the increasing production requirements and the effect of inflation. Similarly, the Committee has allowed the increase in stockpile maintenance (42 percent) which reflects the start of work on the stockpile modernization effort. However, for the remaining three subprogram elements the Committee sees no justification for increases beyond the impact of inflation and has therefore limited increases in each element to 10 percent. The final Committee allowance for the production and surveillance subprogram reflects an increase of 18 percent over that appropriated for fiscal year 1982.

The Committee notes the Department's intention to buy two C–9 aircraft under this program. The Committee is not convinced that the Energy Department needs to acquire these aircraft. Before the Department obligates any funds for aircraft acquisition, the Committee would like to see complete justification for this procurement, together with supporting economic analyses, and written verification from the Secretary of the Air Force that he is incapable of providing the airlift support required by the Department of Energy for these purposes.

*Construction projects.*—Construction projects changed by the Committee are discussed below.

*79–7–c, Proton storage ring, LANL, N.M.*—This project was originally authorized in fiscal years 1979 and 1980 at a total estimated cost of $19 million. The $2.8 million requested for fiscal year 1983 is a cost overrun resulting from funding delays and higher than estimated inflation rates. The Committee considers that the cost overrun is unavoidable and could not have been foreseen at the time the project was originally authorized. The Committee has included a cost variation provision in past year's Acts for situations just such as this (see Section 203 in the fiscal year 1982 Act, Public Law 97–90.) The Committee feels that use of the Section 203, cost variation authority, is appropriate in this case and that additional project authorization is not required.

*83–D–134, Low altitude defense system warhead production facilities.*—This project was included in the budget amendment submitted in March 1982. The Committee has deferred this project consistent with the action taken by the Committee on the MX system in the fiscal year 1983 Defense Procurement Authorization bill. The Committee does not agree with the proposed interim silo basing for the MX missile. Consequently, the Committee has slowed MX missile procurement and the R&D program for the low altitude air defense system (LoAD) has been sharply curtailed in the Defense Procurement Authorization bill. In view of this action, the Committee feels that it would be inappropriate to authorize production facilities for the LoAD warhead in fiscal year 1983.

*82–D–108, Nuclear weapons stockpile improvements.*—The Committee strongly supports the program to improve the safety and maintain-

ability of nuclear weapons. Any accident or incident involving a nuclear weapon could have serious consequences. The reduction made in this project is simply a "bookkeeping" adjustment to bring the total authorization, including available authorization from prior years, into line with the appropriations request. The Committee feels that for omnibus, multi-year projects, authorization need not be granted in excess of appropriations requirements.

*82–D–109, 155mm artillery fired atomic projectile production facilities.*—The Committee likewise supports the production and deployment of the W–82 artillery warhead. Action by the Committee on this project is similar to that taken on the previous project, 82–D–108—a "bookkeeping" adjustment to bring authorization and appropriations into agreement.

*82–D–111, Interactive graphics systems.*—Comments made on the two previous projects are applicable to this project as well. The reduction in authorization is to bring authorization and appropriations requests into agreement.

*78–17–d, Steam plant improvements.*—The Committee rationale for reducing this request is the same as for project 79–7–c. The project was originally authorized in fiscal years 1978–80 with a total estimated cost of $25,500,000. The Committee supports the revised total project cost, but feels that the cost overrun should be accommodated under the cost variation provisions of section 203, P.L. 97–90.

### VERIFICATION AND CONTROL TECHNOLOGY

The Verification and Control Technology program has four specific goals: (a) to provide the technology and equipment necessary for monitoring nuclear weapon-related treaties; (b) to execute the Department's responsibilities in processing export licenses related to nuclear and energy-related materials, equipment and technology; (c) to conduct the analyses necessary to support ongoing treaty initiatives (arms control, Mutual Defense, etc.), nuclear policy issues and intelligence requirements; and (d) to provide the Department's unique weapon and nuclear-related expertise to the Intelligence Community.

The technological and analytical activities conducted under the Verification and Control Technology program are directly dependent on the nuclear weapons expertise resident at the national nuclear weapon laboratories. These activities support, both directly and indirectly, the verification requirements of nuclear test ban treaties and their negotiation, the Director of Central Intelligence's requirements for nuclear weapon-related intelligence, as well as this and other agencies' requirements for proliferation, nuclear weapon, arms control and export control technical analysis.

The Committee approved the requested Verification and Control Technology program which is summarized in the table below:

VERIFICATION AND CONTROL TECHNOLOGY—PROGRAM SUMMARY

[In thousands of dollars]

| Program/subprogram | Fiscal year 1982 appropriation | Fiscal year 1983 request |
|---|---|---|
| Operating expenses: | | |
| Program expenses | 49,100 | 50,600 |
| Program direction | 1,800 | 1,800 |
| Subtotal, operating | 50,900 | 52,400 |
| Capital equipment | 1,100 | 1,500 |
| Total | [1] 52,000 | 53,900 |

[1] Assumes approval by Congress of fiscal year 1982 supplemental request, March 1982, for $2,000,000.

## MATERIALS PRODUCTION

The nuclear materials production program of the Department of Energy provides the special nuclear materials used in the development, testing, and production of nuclear weapons. The Energy Department's materials production program also processes naval reactor fuels and provides nuclear materials for other Department of Energy research projects and to other Government agencies. Because of the magnitude of the investment and lead times involved, careful consideration must be given to long-term planning in the materials production program to avoid disruption of nuclear weapons production programs.

Requirements for nuclear materials are influenced, not only by the level of research and development underway, but also by changes in the nuclear stockpile size and content. The availability of special nuclear materials for weapons production today, for example, is influenced as much by the ability of the United States to recover special nuclear materials from weapons being retired as it is influenced by the new production of such materials. Also, because different types of nuclear weapons use different amounts of nuclear materials, changes in force structure designed to meet the changing requirements of new threats can significantly alter assumptions about the future availability of nuclear materials. Materials production for the weapons program is also closely linked to nonweapons activities. For example, the Department of Energy processes nonproduction reactor fuels from naval propulsion reactors, research reactors, and materials testing reactors for recovery of enriched uranium and plutonium. The great dollar value of nuclear materials also makes it imperative that the Department of Energy manage nuclear scrap materials in an efficient manner in order to minimize new production requirements, reduce storage costs, and conserve energy.

The following table provides details of the Materials Production program and indicates changes recommended by the Committee. The Committee recommended changes are discussed following the table.

MATERIALS PRODUCTION—PROGRAM SUMMARY

[In thousands of dollars]

| Program/subprogram | Fiscal year 1982 appropriations | Fiscal year 1983 budget request | Committee recommendation | Change from request |
|---|---|---|---|---|
| Operating expenses: | | | | |
| Uranium enriching | | 109,000 | 109,000 | 0 |
| Reactor operations | | 360,460 | 360,460 | 0 |
| Processing of nuclear materials | | 220,600 | 220,600 | 0 |
| Special isotope separation | | 23,000 | 23,000 | 0 |
| Supporting services | | 242,040 | 242,040 | 0 |
| Program direction | | 2,100 | 2,100 | 0 |
| Subtotal, operating | 630,680 | 957,200 | 957,200 | 0 |
| Capital equipment: | | | | |
| Reactor operations | | 43,690 | 43,690 | 0 |
| Processing of nuclear materials | | 22,856 | 22,856 | 0 |
| Special isotope separation | | 8,700 | 8,700 | 0 |
| Supporting services | | 32,454 | 32,454 | 0 |
| Subtotal, capital equipment | 67,600 | 107,700 | 107,700 | 0 |
| Construction by project: | | | | |
| 83-D-180, facility storage modification, various locations | | 16,300 | 16,300 | 0 |
| 83-D-146, water pollution control, Fernald, Ohio | | 9,500 | 1,400 | −8,100 |
| 82-D-126, reactor safety and reliability, various locations | | 18,700 | 0 | −18,700 |
| 81-D-142, steam transfer header, SR, South Carolina | | 10,400 | 3,000 | −7,400 |
| 81-D-143, L-reactor upgrade, SR, South Carolina | | 19,000 | 19,000 | 0 |
| 83-D-142, fuel dissolver off-gas transfer and treatment facility, INEL, Idaho | | 7,600 | 7,600 | 0 |
| 82-D-201, special plutonium recovery facilities, SR, South Carolina | | 62,000 | 62,000 | 0 |
| 83-D-135, general plant projects, various locations | | 26,000 | 26,000 | 0 |
| 83-D-136, plant engineering and design various locations | | 2,000 | 2,000 | 0 |
| 83-D-138, PUREX canyon and dissolver filter system improvements, RL, Washington | | 4,250 | 4,250 | 0 |
| 83-D-147, pollution discharge elimination, SR, South Carolina | | 1,000 | 1,000 | 0 |
| 83-D-148, non-radioactive hazardous waste management, SR, South Carolina | | 1,000 | 1,000 | 0 |
| 82-D-124, restoration of production capability, various locations | | 48,500 | 0 | −48,500 |
| 82-D-136, fuel processing facilities, NEL, Idaho | | 6,000 | 0 | −6,000 |
| Subtotal construction | 242,600 | 232,250 | 143,550 | −88,700 |
| Total | [1]940,880 | 1,297,150 | 1,208,450 | −88,700 |

[1]Assumes approval by Congress of fiscal year 1982 supplemental request, March 1982, for $36,500,000.

*Construction projects.*—Changes recommended in the construction projects under the Materials Production program are discussed below.

*83-D-146, Water pollution control, Fernald, OH.*—This project was added as part of the budget amendment. The Committee chose to limit authorization to the amount requested for appropriations. That amount should be used only for design and to initiate the procurement of long lead equipment items. The Committee will reconsider the project authorization as part of the fiscal year 1984 budget when the total cost can be estimated more accurately.

*82–D–126, Reactor safety and reliability.*—This project was developed partly as a result of lessons learned from the Three Mile Island incident. It provides safety improvements to all operating reactors. Last year the Committee authorized $42,900,000 for this project; appropriations were only $6,000,000. The fiscal year 1983 appropriations request is $7,000,000 which can be covered by the fiscal year 1982 authorization; therefore, the Committee has not included the additional authorization requested. The Committee strongly supports this project and feels that it should proceed as rapidly as possible.

*81–D–142, Steam transfer header, SR, S.C.*—The Committee has reduced the authorization request for this project to bring it into agreement with the appropriations request. This project is an integral part of the upgrade of the L–Reactor to prepare it for restart and the Committee is fully supportive of the project.

*82–D–124, Restoration of production capabilities.*—This project is the result of a congressionally-directed study to examine the materials production complex to determine restoration necessary to update and repair facilities and equipment so that the complex operates safely at optimum efficiency. The Committee supports the project. Action by the Committee to delete the authorization requested for fiscal year 1983 is possible because excess authorization exists from fiscal year 1982.

*82–D–136, Fuel processing facilities, INEL, ID.*—This project was authorized by the Committee last year in the amount of $40,000,000, the total estimated cost. Appropriations for fiscal year 1982 was $14,000,000 and the appropriation request for fiscal year 1983 is $14,000,000. The total estimated cost has grown by $6,000,000 and authorization was requested for this amount in fiscal year 1983. The Committee has elected not to authorize any increase in fiscal year 1983. Sufficient authorization exists to cover the full appropriation request. The Committee urges the Department to reexamine this project to see if it cannot be completed within the amount authorized in fiscal year 1982.

## DEFENSE NUCLEAR WASTE MANAGEMENT

The defense waste management program provides for handling and disposal of low-level and airborne radioactive wastes, for storage of transuranic and high-level waste, and for the development and demonstration of technologies for their disposal. Fiscal year 1983 efforts will upgrade waste handling, storage, and disposal operations by transferring high-level waste from old single-shell tanks at Savannah River (SR) and Hanford into new double-shell tanks, and will involve construction of new facilities, improvement of facilities, and upgrading of burial ground operations. The long-term program in fiscal year 1983 will focus on processing technologies for high-level waste at Savannah River, preparation of transuranic waste from Idaho and other agency sites for the Waste Isolation Pilot Plant (WIPP), and low-level waste technology for agency sites. The waste form for immobilization of SR waste will be selected. Identification and development of safe and cost-effective applications of radioisotopes and materials recovered from the defense fuel cycle will continue.

The Defense Waste Processing Facility (DWPF) at Savannah River will provide the final step in processing high-level waste for disposal. Facility design will continue in fiscal year 1983 leading to "hot" operations by fiscal year 1990. The DWPF will immobilize the high level waste sludge, which contains most of the long-lived radionuclides, for storage, transportation to, and disposal in a geologic repository. Immobilization and confinement in a geologic repository will ensure the long-term isolation of these wastes from the environment with minimal maintenance and surveillance.

The Waste Isolation Pilot Plant, located near Carlsbad, New Mexico, will demonstrate closure of the defense nuclear fuel cycle. The WIPP facilities will be capable of routine operations to receive, inspect, package, and emplace pilot plant quantities of remote-handled high-level and transuranic waste and contact-handled waste in an environment typical of a repository. This research and development facility will be sized to handle quantities typical of defense nuclear waste inventories and anticipated generation rates.

The following table provides details of the Defense Nuclear Waste Management program and indicates changes recommended by the Committee. Each of the changes recommended is discussed following the table.

DEFENSE NUCLEAR WASTE MANAGEMENT—PROGRAM SUMMARY

[In thousands of dollars]

| Program/subprogram | Fiscal year 1982 appropriation | Fiscal year 1983 budget request | Committee recommendation | Change from request |
|---|---|---|---|---|
| Operating expenses: | | | | |
| Interim waste management | | 197,313 | 197,313 | 0 |
| Long-term waste management | | 56,861 | 56,861 | |
| Terminal storage | | 14,000 | 14,000 | 0 |
| Decontamination and decommissioning | | 12,655 | 12,655 | 0 |
| Transportation R. & D | | 6,100 | 6,100 | 0 |
| Program direction | | 2,000 | 2,000 | 0 |
| Subtotal, operation | 247,028 | 288,929 | 288,929 | 0 |
| Capital equipment: | | | | |
| Interim waste management | | 25,062 | 25,062 | 0 |
| Long-term waste management | | 4,939 | 4,939 | 0 |
| Terminal storage | | 600 | 600 | 0 |
| Decontamination and decommissioning | | 145 | 145 | 0 |
| Transportation R. & D | | 900 | 900 | 0 |
| Subtotal, equipment | 20,833 | 31,646 | 31,646 | 0 |
| Construction by project: | | | | |
| 83-D-156, general plant projects, various locations | | 19,145 | 19,145 | 0 |
| 83-D-157, additional radioactive waste storage facilities, RL, Washington | | 19,000 | 19,000 | 0 |
| 81-T-104, radioactive waste facilities improvements, OR, Tennessee | | 1,000 | 0 | −1,000 |
| 83-D-159, general plant projects, SR, South Carolina | | 500 | 500 | 0 |
| 81-T-105, defense waste processing facility, SR, South Carolina | | 30,000 | 75,000 | +45,000 |
| 77-13-f, waste isolation pilot plant, New Mexico | | 110,800 | 71,200 | −39,600 |
| Subtotal, construction | 104,032 | 180,445 | 184,845 | +4,400 |
| Total | [1] 371,893 | 501,020 | 505,420 | +4,400 |

[1] Assumes approval by Congress of fiscal year 1982 supplemental, March 1982, for $7,000,000.

*Construction projects.*—Changes recommended in the construction projects under the Defense Nuclear Waste Management program are discussed below.

*81–T–104, Radioactive waste facilities improvements, OR, TN.*—This project was authorized in fiscal year 1981 in the amount of $20,000,000, the total estimated cost. Appropriations of $5,000,000 in fiscal year 1981 and $7,000,000 in fiscal year 1982 have been approved. The appropriation request for fiscal year 1983 is $5,000,000. Sufficient prior year authority exists to cover the appropriations request for fiscal year 1983. In addition, the $1,000,000 cost overrun can be covered under the cost variation provisions of section 203 of Public Law 97–90.

*81–T–105, Defense waste processing facility, SR, S.C.*—This facility will process the high level nuclear wastes now stored in tanks at Savannah River and transform the waste from a liquid and associated sludges into a solid, glass form. Preliminary engineering and design has been accomplished with funds authorized in fiscal years 1981 and 1982. The level of authorization proposed in the budget request ($30,000,000) would permit design to continue in fiscal year 1983 with a construction start during the second quarter in fiscal year 1984. The Committee has elected to increase the authorization to accelerate the start of construction by up to one year. The Committee feels that this facility is a vital next step toward solving the long-term defense nuclear waste problem and it should be funded at a rate to permit the earliest possible completion date. Testimony from Department of Energy witnesses indicated that $75 million could be prudently expended to insure the plant's completion before 1990.

*77–13–f, Waste isolation pilot plant, N.M.*—The Committee has supported the Waste Isolation Pilot Plant project since its inception. This facility will demonstrate the viability of the long-term storage of processed defense nuclear waste. Prior to fiscal year 1983, a total of $157.6 million had been authorized for this project; appropriations through fiscal year 1982 totaled $118 million. The request for authorization and appropriations for fiscal year 1983 is $110.8 million. The Committee has reduced the authorization request by $39.6 million, since that amount of excess authorization exists from fiscal year 1982 and prior years. This will enable the full appropriation request of $110.8 million for fiscal year 1983 to be funded and the Committee strongly supports appropriations at the requested level.

## Nuclear Materials Security and Safeguards

### SECURITY OPERATIONS

Security Operations provides for the enhancement of the Department's capabilities to protect classified material and information. Present activity is aimed at insuring the continued effectiveness of security at the Department's facilities through improvement of protective force training; timely analysis, dissemination, and utilization of intelligence information; improved access control measures; and more stringent control of classified information.

During fiscal year 1983, the Office of Safeguards and Security (OSS) will continue to fund critical tasks aimed at improving the Agency's protective force capabilities. A guard standards validation

study which will be completed in fiscal year 1982 will serve as a test to demonstrate the ability of the guards to perform, and as a basis for revised medical and tactical standards and measures. Improved guard force training will be developed and implemented based on these norms. The validation effort will be melded with the ongoing Multiple Integrated Laser Engagement System (MILES) activity to provide maximum realism in tactical training exercises. MILES will continue to serve as the basic tactical training aid through a program of equipment loans available to all Department protective force units. Further, MILES will also be applied as a security force performance testing and effectiveness evaluation tool.

As part of the sustained focus on operational security, OSS will provide Department field elements with timely intelligence information relating to the current and changing threat. This effort will be enhanced by including guidance and technology which will establish a capability to neutralize adversarial attempts to interfere with Department communications and information processing systems. The activity will include (1) surveys of field operations to determine the degree of vulnerability to hostile information collection efforts; (2) recommendations to preclude foreign exploitation of identified security weakness; (3) the development of audio surveillance and suppression methods by providing the field an appropriate awareness and understanding of both the threat and the techniques for prevention; and (4) the design and implementation of a computer security program to protect all the classified information stored and processed in the Department's computer systems.

Finally, OSS will continue to improve the capability to perform comprehensive technical and psychological threat credibility assessments. These analyses of threats during an actual or perceived emergency are intended as part of Security Operations to provide advice and recommendations to the Department's Emergency Action and Coordination Team (EACT), the Nuclear Regulatory Commission (NRC), the Federal Bureau of Investigation (FBI) and other appropriate Federal, State, and local agencies. In fiscal year 1983, OSS will concentrate on enhancing the efficiency of the assessment methodology to assure an expeditious processing of the technical, behavioral and operational factors associated with threat measures.

### CLASSIFICATION

The Office of Classification is responsible for implementing the Department's classification and declassification program. The objectives of the program are to establish and implement policy for the classification of Restricted Data, Formerly Restricted Data, and National Security Information within the Department's jurisdiction in accordance with the requirements of the Atomic Energy Act of 1954, as amended, and applicable Executive Orders. The program must also assure the continuous review of Restricted Data in order to determine what may be declassified and disseminated in the interest of scientific and technical progress and the general welfare, without damage to the national security.

Specifically, the Classification program (1) provides continuing guidance to Headquarters and field organizations on classification and declassification policies and procedures; (2) develops and updates

classification guidance for nuclear weapons and other classified areas; (3) handles classification and declassification reviews, such as Freedom of Information Act requests and Mandatory Review Requests pursuant to Executive Order 12356 and (4) performs appraisals of field office and contractor classification functions.

In compliance with Congressional, General Accounting Office (GAO), and Inspector General (IG) commitments, a comprehensive Classification Review Program rereview project will continue in fiscal year 1983.

### SAFEGUARDS OPERATIONS

Safeguards Operations consists of three parts: assistance to Department field operations, operation of the Nuclear Materials Management and Safeguards System, and operation of the New Brunswick Laboratory.

The primary objective of Safeguards Operations is to provide expert technical assistance to field operations. Headway made in fiscal year 1982 will be accelerated in fiscal year 1983 to identify major deficiencies at eleven key facilities and to provide cost-effective corrective designs. This increased effort will build primarily on a large base of program developed technology. Future directions will emphasize: identification of major deficiencies at the Department's facilities, demonstration of advanced integrated systems designed to meet site-specific needs, and the establishment of protective force operational response strategies that will reduce response time and improve the effectiveness of the safeguards system.

Funds are provided for continued operation of the Nuclear Materials Management and Safeguards System to track all nuclear materials in the United States. Annually, approximately 650,000 nuclear material transactions (e.g., shipments, receipts, inventory changes) from 130 contractors and 1,400 licensees are entered into the system. This system is being evaluated in conjunction with NRC to determine system upgrade requirements.

Funds are included for operation of the New Brunswick Laboratory (Argonne, Illinois), the principal U.S. laboratory facility for nuclear materials measurements and standards, which serves the Department's nuclear contractors, NRC licensed facilities and the international community. This operation maintains an ongoing capability for nuclear material verification and unbiased reference analyses, nuclear standards preparation and distribution for calibration and standardization of measurements, and assessment and evaluation of laboratory analytical practices and technology.

### INTERNATIONAL SAFEGUARDS

International Safeguards will continue at the same dollar level as fiscal year 1982. The primary objective of these efforts is the strengthening of international safeguards in support of United States nonproliferation and national security objectives.

A major effort for this area is the development of international safeguards for near-term application at the new Gas Centrifuge Enrichment Plant (GCEP), Portsmouth, Ohio (expected start-up in 1984), consistent with the United States/International Atomic Energy

Agency (IAEA) Agreement which came into force December 9, 1980. This activity also develops other international safeguards technology and equipment associated with bilateral agreements. Training of foreign safeguards personnel is provided consistent with the Nuclear Nonproliferation Act of 1978.

Compliance with International Agreements and nonproliferation objectives requires the tracking of both United States materials exported overseas and materials of foreign origin in the United States. Funds are provided for the tracking of United States nuclear material in 50 countries, tracking and reporting to the IAEA nuder the U.S./IAEA Safeguards Treaty, and establishing inventories of nuclear materials for Bilateral Agreements.

### TECHNOLOGY

This activity provides a base of technology to be used for safeguarding Department of Energy and other United States nuclear facilities. The fiscal year 1983 and beyond program has been focused on identified technology requirements as they relate to facility needs. Means of monitoring and controlling personnel access and movement within a facility will be demonstrated in one or more of the Department's facilities. A broadened base of capability for measuring uranium and plutonium materials of different compositions and forms in the nuclear fuel cycle will be pursued to reflect the increasing need and benefits of automated, remote measurements. The capability to utilize existing technology to design cost-effective integrated designs will continue to be developed.

Major achievements will include field test and evaluation of on-line plutonium solution instrumentation for needed improvements in material accounting, upgrade of guard force protective equipment and communications technology, complete laboratory testing of a high explosive detector for personnel portals, issuance of barrier and intrusion detection handbooks, demonstration of a prototype remote-reading badge system for personnel monitoring and access control, and establishment of a procedure for designing cost-effective integrated safeguards systems.

The following table summarizes the Nuclear Materials Security and Safeguards program which was approved by the Committee as requested.

### SECURITY AND SAFEGUARDS—PROGRAM SUMMARY

[In thousands of dollars]

| Program/subprogram | Fiscal year 1982 appropriation | Fiscal year 1983 request |
|---|---|---|
| Operating expenses: | | |
| Base program | 38,381 | 37,310 |
| Program direction | 5,138 | 5,850 |
| Subtotal, operating | 43,519 | 43,160 |
| Capital equipment | 3,700 | 3,700 |
| General plant projects | 0 | 500 |
| Total | 47,219 | 47,360 |

## Security Investigations

The objective of the Security Investigations program is to insure that the common defense and security of the United States will not be endangered by the granting of security clearances to all federal and Government contractor personnel who must, in the performance of their work, have access to Restricted Data, National Security Information, or Special Nuclear Material, or who occupy a designated Critical Sensitive position. The Office of Safeguards and Security is responsible for this activity.

The fiscal year 1983 budget request for the Security Investigations program is $28,500,000, an increase of $4,900,000 over the amount appropriated in fiscal year 1982. This increase will be used to partially offset the projected increase in the cost of full field investigations. The projected cost for a Federal Bureau of Investigation (FBI) full field background investigation (BI) increases from $1,531 in fiscal year 1982 to $1,760 in fiscal year 1983 and for the Office of Personnel Management from $1,350 in fiscal year 1982 to $1,700 in fiscal year 1983. The fiscal year 1983 budget request will provide for approximately 25,966 security investigations (15,166 full field background investigations and 10,800 National Agency Checks). Over 85 percent of all security investigations funded by this activity are for the Department's contractor employees.

The Committee is concerned with the cost growth in this program. The requirement to carefully control the access to sensitive facilities and information is recognized and supported. However, this account has nearly doubled since fiscal year 1980 and the Committee feels that the Department should reevaluate this program to seek cost savings. The Department may well be attempting to process clearances for some individuals who do not need them or who could do without the costly, expensive full field background investigations.

The Committee requests the Department to examine the feasibility of processing security clearances on a reimbursable basis only; i.e., if an agency wants someone cleared, the agency must pay for it. This might eliminate unnecessary security clearances. The Committee will expect the department to be able to address this issue in conjunction with the legislative review of the fiscal year 1984 budget.

The Committee has reduced the request by $8 million, since that amount is used to grant security clearances to "other-than-defense activities" according to the justification data and the Committee feels these clearances should be paid for by the agency requesting them.

The following table summarizes the Security Investigations program and the Committee recommendations on that program.

SECURITY INVESTIGATIONS—PROGRAM SUMMARY

[In thousands of dollars]

| Program/subprogram | Fiscal year 1982 appropriation | Fiscal 1983 request | Committee recommendation | Change from request |
|---|---|---|---|---|
| Base program | 23,600 | 28,500 | 20,500 | −8,000 |

## General Provisions

*Section 201—Reprograming.*—This section defines and limits the authority of the Department to use funds appropriated pursuant to this bill for program amounts in excess of those amounts stated in the bill or for programs not yet considered by the Congress. In general the limitation on reprograming is 105 percent of the authorized amount; however, exceptions are permitted subject to notification of the appropriate committees of the Congress. A provision in last year's act limiting total obligations to the total amount authorized in the bill is not included in the Department's request. The section recommended by the committee is identical to that enacted last year.

*Section 202—Limits on General Plant Projects.*—This section authorizes small construction projects. The ceiling for these projects in the past has been $1 million. The Department requested that this ceiling be raised to $1.2 million for fiscal year 1983, but the Committee does not feel that this increase can be justified and has retained the $1 million ceiling. The Department had also requested that the aggregate ceiling on General Plant Projects be dropped; however, the Committee sees no need for this change and has recommended a provision identical to that enacted last year.

*Section 203—Limits on Construction Projects.*—For construction projects costing in excess of $1 million, the Department must have line item authorization. The committee recognizes that estimating the cost of construction projects is not a precise science and has included this section to permit increases above the authorized amount by not more than 25 percent. Exceptions to this limitation are permitted subject to notification of the appropriate committees of the Congress. This section is essentially identical to that enacted in last year's act.

*Section 204—Fund Transfer Authority.*—This section provides that, when specified in the Appropriation Act, funds authorized to be appropriated by this bill may be transferred to other agencies for the performance of the work for which the appropriation is made, and permits merger of such funds with the appropriations to which they are transferred. This is standard language that has appeared in past annual authorization acts.

*Section 205—Authority for Construction Design.*—The Department is authorized to proceed with the design of any construction project if the design cost (Title I and Title II) does not exceed $2 million; design work for such construction projects does not have to be specifically authorized by law. For construction projects where the design cost will exceed $2 million, line item authorization for the design is required. The appropriate committees of Congress are to be notified before design commences of any project whose design cost will exceed $300,000. This provision is identical to that included in last year's act.

*Section 206—Authority for Emergency Construction Design.*—This section authorizes the use of any available construction funds to proceed with the design of urgently needed facilities. This section recognizes that new and urgent construction requirements can occur to support unforeseen weapons production requirements or to protect life. The committee would expect to be notified if this authority were ever used. It is identical to section 206 of last year's act.

*Section 207—Funds Available for All National Security Programs of the Department of Energy.*—This section authorizes the transfer of funds within National Defense program accounts and is an annually recurring provision.

*Section 208—Adjustments for Pay Increases.*—This section authorizes increases in appropriations to accommodate Federal pay raises. The same provision was included in last year's act.

*Section 209—Availability of Funds.*—This section permits appropriations made pursuant to this bill to remain available until expended.

## Armed Services Committee Action

On August 3, 1982, the Committee on Armed Services approved the bill, as amended, by unanimous vote and ordered it reported.

## Regulatory Impact

Paragraph 5 of rule XXIX of the Standing Rules of the Senate requires that a report on the regulatory impact of a bill be included in the report on such a bill. The committee finds that in the case of this bill there is no regulatory impact.

## Budget Impact

In compliance with the Budget Reform Act, the Congressional Budget Office has furnished the following budget estimate:

U.S. Congress,
Congressional Budget Office,
*Washington, D.C., August 3, 1982.*

Hon. John Tower,
*Chairman, Committee on Armed Services,*
*U.S. Senate, Washington, D.C.*

Dear Mr. Chairman: Pursuant to Section 403 of the Congressional Budget Act of 1974, the Congressional Budget Office has prepared the attached cost estimate for S. 2286, the National Security Programs Authorization Act of 1983, as ordered reported by the Committee on August 3, 1982.

Should the Committee so desire, we would be pleased to provide further details on this estimate.

Sincerely,

Raymond C. Scheppach
(For Alice M. Rivlin, Director).

### CONGRESSIONAL BUDGET OFFICE—COST ESTIMATE

1. Bill number: S. 2286.
2. Bill title: National Security Programs Authorization Act of 1983.
3. Bill status: As ordered reported by the Senate Armed Services Committee on August 3, 1982.
4. Bill purpose: Title I, National Security Programs, authorizes appropriations for operating expenses and plant and capital equipment.

Title II, General Provisions, provides that appropriations authorized by this act for salary, pay, retirement, or other benefits for federal employees may be increased by amounts necessary to meet the requirements of law.

5. Cost estimate:

[By fiscal year, in millions of dollars] [1]

| | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Title I: Function 050: | | | | | |
| Authorization amount | 5,570.28 | | | | |
| Estimated outlays | 2,906 | 1,827 | 747 | 91 | |
| Title II: Function 920: | | | | | |
| Estimated authorization | 3 | | | | |
| Estimated outlays | 3 | | | | |
| Total: | | | | | |
| Estimated authorization | 5,573.28 | | | | |
| Estimated outlays | 2,909 | 1,827 | 747 | 91 | |

[1] Totals may not add due to rounding.

6. Basis of estimate: Title I—The authorization amount is as stated in the bill. Outlays were estimated assuming that funds will be appropriated in full and available for obligation not later than October 1, 1982. The spendout pattern is estimated using historical patterns for operations and investment expenditures.

Title II—The authorization amount was computed assuming a pay base of $83 million and a pay raise of 4.0 percent effective October 1, 1982.

7. Estimate comparison: None.

8. Previous CBO estimate: None.

9. Estimate prepared by: Thomas D. Phillips.

10. Estimate approved by:

C. G. NUCKOLS
(For James L. Blum,
*Assistant Director for Budget Analysis*).

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